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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,875	04/12/2004	Byoung-Woo Cho	1749.1010	1817

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EXAMINER	
DURHAM, NATHAN E	
ART UNIT	PAPER NUMBER
3765	
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11/09/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/821,875	CHO, BYOUNG-WOO	
	Examiner	Art Unit	
	NATHAN E. DURHAM	3765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 December 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's amendment and arguments, filed 13 February 2006, have been reviewed and considered. Claim 1 has been amended and therefore, claims 1-9 are currently pending. Applicant's arguments have been fully considered but they are not persuasive for the reasons addressed below.

In response to the 35 U.S.C. 103(a) rejection by Lo (U.S. Patent 6,493,880), the applicant argues two specific points. Firstly the applicant argues that Lo discloses a stretchable woven fabric, not a mesh. The examiner respectively disagrees and notes that Dicitonary.com defines a mesh as "any knit, woven, or knotted fabric of open texture". The examiner points out that any knitted or woven fabric is considered a mesh because knitted and woven material is just interlaced yarns (with spacing therebetween). Secondly, the applicant argues that Lo fails to disclose one non-covered stretch yarn and a plurality of non-stretch yarns. The applicant points out that Lo discloses a spandex yarn that defines a core usually composed of one spandex yarn, wrapped with a filament or spun yarn. The examiner finds it unclear what the applicant is specifically arguing. Is the applicant arguing that Lo fails to disclose a non-covered stretch yarn or a plurality of non-stretch yarns? In regards to a non-covered stretch yarn, nowhere in Lo does it appear that the spandex yarn is a core wrapped with a filament or spun yarn. The examiner requests the applicant to point out such a reference within Lo. Regardless, the negative limitation "non-covered" is given its

broadest reasonable interpretation and a spun yarn (or filament) around a spandex yarn can be considered an entire non-covered stretch yarn because the spun yarn (or filament) can be considered a component of the stretch yarn, not a stretching hindrance or covering. A filament or spun yarn would not prevent a spandex yarn from stretching since that is the purpose of the spandex yarn. Accordingly, the 35 U.S.C. 103(a) rejection of claims 1-8 by Lo still stands.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation has clearly been stated within the previous Office Action. On Page 5 of the previous Office Action it was stated that "Uno et al. teaches that textured yarn enables the yarn to be more stretchable" and thus "requiring the stretchable yarn [of Lo] to be textured would make the mesh adaptable to a wider range of sizes of heads". Accordingly, the 35 U.S.C. rejection of claim 9 by Lo in view of Uno et al. still stands.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Lo (U.S. Patent 6,493,880).

In regard to claims 1-2, Lo discloses elastic headwear comprising: a head-covering portion being stretchable in at least a circumferential direction thereof having a plurality of pieces (col. 3, line 67 and col. 4, lines 1-4), at least one piece being made of a stretchable knitted mesh which comprises at least one non-covered stretch yarn and a plurality of non-stretch yarns (col. 5, lines 5-11); and a sweatband (25) being stretchable in at least a circumferential direction thereof (Col. 5, lines 16-17), wherein the non-covered stretch yarn and the plurality of non-stretch yarns are provided in rows without being twisted with each other.

In regard to claims 3 and 4, Lo discloses that the non-covered stretch yarn is a spandex yarn (col. 4, lines 61-62).

In regard to claim 5, Lo discloses that the non-stretch yarns can be polyester (col. 5, lines 5-11).

In regard to claim 6, Lo discloses that the front pieces of the crown are stiffened (col. 4, lines 41-44).

In regard to claim 7, Lo discloses that a common way for adjusting the size of the cap employs an adjustable strap disposed at the back of the cap for adjustment by the wearer (col. 1, lines 15-17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lo's apparatus by including a size

adjustment member disposed on the rear pieces to further adjust the size of the crown portion since it is a common practice in the art.

In regard to claim 8, Lo discloses a head covering portion of a headwear comprising a first portion (12, 13) corresponding approximately to a front of a user's head; a second portion (15, 16); and a third portion (14, 17) between the first and second portions, the second and third portions comprising a stretchable knitted mesh (col. 5, lines 5-11).

In regard to claims 1 and 8, the most important characteristic of the head covering is the ability to be stretchable in the circumferential direction. Lo discloses a knitted mesh (col. 5, lines 6- 7) and that the head covering portion be stretchable in the circumferential direction (col. 4, lines 1-4). Lo provides a clue to one of ordinary skill in the knitting art at col. 5, lines 6 & 7 where it is mentioned that a small amount of spandex is in the weft direction. If this were weft knitted, a statement of plying of feeding along with other yarn would be provided. Since stretch warp knit fabrics primarily receive their stretch characteristics from the stretch yarns, it is interpreted that the small amount of spandex in the weft direction implies a warp knit fabric. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a warp knitted mesh to produce the head covering portions that are stretchable in the circumferential direction as disclosed by Lo since Lo provides a clue to one of ordinary skill in the art of knitting that the fabric used is warp knitted fabric.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lo (U.S. Patent 6,493,880) in view of Uno et al. (U.S. Publication 2004/0016041).

Lo discloses a crown portion for being worn on a head of a wearer, the crown portion including front pieces (12, 13), side pieces (14, 17), and rear pieces (15, 16) which form a hemispherical shape; a visor portion (18) coupled to the crown portion for blocking sunlight; and a stretchable sweatband (25) provided at an interior circumference of the crown portion, wherein the side pieces and rear pieces comprise stretchable warp knitted mesh, the stretchable warp knitted mesh comprising two non-stretch threads comprising a plurality of synthetic non-stretch yarns; and a stretch thread (col. 5, lines 5-11). Uno et al. teaches that textured yarn enables the yarn to be more stretchable (paragraph 0049). Requiring the stretchable yarn to be textured would make the mesh adaptable to a wider range of sizes of heads. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lo's apparatus to require the stretch yarn to be textured as taught by Uno et al. in order to allow the hat to be adaptable to a wider range of sizes of heads.

Lo does not specifically disclose that the non-stretch threads used to fabricate the mesh utilize a plurality of non-stretch yarns. However, threads utilizing a plurality of yarns are widely used in the art. Lo also does not specifically disclose that the stretch thread is comprised of a plurality of non-stretch yarns. However, Lo does leave a clue that non-stretch yarns are used in the weft direction along with the stretch yarn. Lo discloses utilizing synthetic fiber yarn and a small amount of spandex in the weft direction (col. 5, lines 6 and 7). This implies that there are other yarns in the weft

direction. Since only a small amount is stretchable, the rest of the weft yarns are not stretchable. Lo does not specify the number of non-stretch yarns for each thread, only that they exist. The instant disclosure does not provide any reason as to why more than one non-stretch yarn is required for each thread instead of just one non-stretch yarn. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a plurality of non-stretch yarns in each thread since utilizing a plurality of yarns is a widely used practice in the art.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN E. DURHAM whose telephone number is

(571)272-8642. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary L. Welch can be reached on (571) 272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NED

/GARY L. WELCH/
Supervisory Patent Examiner, Art Unit 3765